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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/248,738 02/10/99 BEYER

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EXAMINER

WM01/1010

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ART UNIT

PAPER NUMBER

2664

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10/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/248,738

Applicant(s)

BEYER ET AL.

Examiner

Kevin C. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13, 19-21, 28-32, 41-44, 52 and 53 is/are rejected.
- 7) ☒ Claim(s) 8, 14-18, 22-27, 33-40, 45-51 and 54-59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Specification

1. The disclosure is objected to because of the following informalities: On page 4, line 18, "request" should be --clear--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minamisawa (US 6,026,303).

2. Regarding claim 1, Minamisawa discloses a method comprising activating a node such that the node first attempts to establish contact with other nodes that may exist within the network (Figure 1; Figure 6A, steps S101) and if unsuccessful, establishing itself as a single node network (step S102). However, Minamisawa does not disclose that the network is a

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computer network. One skilled in the art would recognize that voice units as well as data units are suitable for ad hoc networking. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have computers as the nodes in the network of Minamisawa as a matter of design choice in order to allow, for example, wireless networking of laptop computers.

3. Regarding claims 2-4, Minamisawa does not disclose that the first node attempts to cycle through known channels to establish contact. One skilled in the art would recognize that if more than one communication channel is present, a determination of whether there is another operational device is typically performed by testing each available channel for use. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to allow a node to cycle through known channels in the invention of Minamisawa to detect activity.

4. Regarding claim 5, if a response packet is received, then a node joins the network (Figure 6C, steps S122, S123, S127, and S128) with a known parent.

5. Regarding claim 6, a synchronization signal is used to correct timing (Figure 6A, step S101)

6. Regarding claim 7, a code is used to identify the networks (Figure 6A, step S110; note: parent wireless terminal identifier).

7. Regarding claims 9-10, the node listens for other child wireless terminals (Figure 6A, step S107) and transmits a response (step S109)

8. Regarding claim 11, a response includes an indication of time within the network ((Figure 6D, steps S135 and S131).

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9. Regarding claim 12, the response from the parent also includes an identifying code (Figure 6A, steps S109 and S110).

Claims 13, 19-21, 28-32 and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flammer (US 5,130,987).

10. Regarding claims 13, 19-21 and 28, Flammer discloses a method of receiving at a first node (Figure 1) an identity of a second node and an indication of time within the network according to a second node of a network (col. 7, lines 34-41) and determining whether to adjust the time according to the indication of time (col. 7, lines 46-51). However, Flammer does not disclose that the network is a computer network. One skilled in the art would recognize that voice units as well as data units are suitable for ad hoc networking. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have computers as the nodes in the network of Flammer as a matter of design choice in order to allow, for example, wireless networking of laptop computers.

11. Regarding claims 29-30, unique identifiers distinguish the stored age values (col. 7, lines 46-51).

12. Regarding claim 31, Flammer does not disclose that all nodes are within two-hops of a first node. One skilled in the art would recognize that certain nodes may be used to relay information for nodes that are not in direct communication. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a node act as a repeater in the invention of Flammer in order to extend the communications range of a node (note: it is reasonable that at certain times when the nodes are in relatively close proximity that every node will be within a two-hop neighborhood of any given node).

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13. Regarding claim 32, Flammer does not disclose priority for contentions. One skilled in the art would recognize that when contending nodes compete for available bandwidth, a priority may be given to certain nodes requiring real time data transmission, a larger bandwidth, or a higher quality of service which has been paid for, for example. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to give priority to contending nodes in the invention of Flammer as a matter of design choice.

14. Regarding claims 41-44, Flammer does not disclose that the control packet advertises a schedule for a data transmission. One skilled in the art would recognize that a master node typically allocates available time slots and notifies slave nodes about idleness of a time slot. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to advertise a schedule for data transmission in the invention of Flammer in order to coordinate the transmission of slave nodes to a master node.

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisler et al. (US 5,142,533).

15. Regarding claim 52, Crisler discloses a method of using a topology independent scheduling procedure (Figure 2B; note: random access) within a network and a topology-dependent scheduling procedure (Figure 2B; note: reserved access) to avoid collisions in contented time periods (Figure 2A). However, Crisler does not disclose that the network is a computer network. One skilled in the art would recognize that voice, video or data units are suitable for ad hoc networking. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have computers as the nodes in the network of Crisler as a matter of design choice in order to allow, for example, wireless networking of laptop computers.

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Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crisler as applied to claim 52 above, and further in view of Flammer.

16. Regarding claim 53, Crisler does not disclose using the age of the network to determine a transmission timing. Flammer discloses a method of receiving at a first node (Figure 1) an identity of a second node and an indication of time within the network according to a second node of a network (col. 7, lines 34-41) and determining whether to adjust the time according to the indication of time (col. 7, lines 46-51) in order to synchronize the transmission between the nodes. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use the age of the network in the invention of Crisler as evidenced by Flammer in order to synchronize transmission between the nodes.

Allowable Subject Matter

17. Claims 8, 14-18, 22-27, 33-40, 45-51 and 54-59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 703-305-0139. The examiner can normally be reached weekdays, except Wednesday, from 8:00 AM to 6:30 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached at 703-305-4366. The fax phone number for Technology Center (TC) 2600 is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office for TC 2600 at 703-306-0377.

Kevin C. Harper



October 4, 2001



HUY D. VU
PRIMARY EXAMINER